



<b>COURSE: Image reconstruction</b>		
<b>DEGREE: Master on Information &amp; Health Engineering</b>	<b>YEAR: 2021/2022</b>	<b>TERM: 2nd</b>

WEEKLY PLANNING									
WEEK	SESSION	DESCRIPTION	GROUPS (mark X)		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	Indicate YES/NO If the session needs 2 teachers	WEEKLY PROGRAMMING FOR STUDENT		
			LECTURES	SEMINARS			DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)
1	1	Introduction			X			1,5	
1	2	Some basis			X			1,5	4
2	3	Projective systems			X			1,5	2
2	4	Analytical reconstruction – 2D FBP			X		Projector submission	1,5	2
3	5	Analytical reconstruction – 2D FBP			X			1,5	2
3	6	Analytical reconstruction – 2D FBP			X			1,5	2
4	7	Analytical reconstruction – 2D FBP			X			1,5	2
4	8	Analytical reconstruction – Fan beam			X		FBP submission	1,5	2
5	9	Analytical reconstruction – Fan beam			X			1,5	2

5	10	Analytical reconstruction – Fan beam			X			1,5	4
6	11	Analytical reconstruction – Limited angle/Parker			X			1,5	2
6	12	Analytical reconstruction – FDK			X		Fan beam + Parker submission	1,5	2
7	13	3D PET data - Single Slice Rebinning			X			1,5	2
7	14	Iterative reconstruction – Introduction/Selections			X		FDK submission	1,5	2
8	15	Iterative reconstruction – Introduction/Selections			X			1,5	2
8	16	Iterative reconstruction – System matrix			X		SSRB submission	1,5	4
9	17	Iterative reconstruction – (Weighted) Least Squares			X			1,5	2
9	18	Iterative reconstruction – (Weighted) Least Squares			X			1,5	2
10	19	Iterative reconstruction – MLEM/OSEM			X			1,5	2
10	20	Iterative reconstruction – Physical model			X			1,5	2
11	21	Iterative reconstruction – Penalized likelihood/Surrogate – Physical model			X			1,5	4
11	22	Iterative reconstruction – Penalized likelihood/Surrogate – Physical model			X			1,5	2
12	23	Iterative reconstruction – Least squares/Surrogate – Dynamic CT			X		2D LS, WLS, MLEM-OSEM submission	1,5	2
13	24	Iterative reconstruction - Split Bregman - Dynamic CT – PICCS			X			1,5	2
14	25	Iterative reconstruction - Split Bregman - Dynamic CT – PICCS			X		Penalized likelihood submission	1,5	4
14	26	Deep learning in image reconstruction			X			1,5	2
15	27	Iterative reconstruction – Prior data			X			1,5	4
15	28	Deep learning in image reconstruction			X		Prior data submission	1,5	2

X

**Subtotal 1**

**42**

**66**

**Total 1** (Hours of class plus student homework hours between weeks 1-14)

**TOTAL A** (Total 1 + Total 2)

**108**

